1. A method for adaptive multimode decoding for data packet-based communication, the method comprising:

(a) detecting a burst erasure;

(b) when a detected burst erasure has a burst erasure level which is greater than a first selected threshold, decoding a plurality of received data packets utilizing a first corresponding burst erasure correction code; and

(c) when a burst erasure has not been detected, decoding a plurality of received data packets utilizing a first corresponding random bit error correction code.

2. The method of claim 1, further comprising:

(d) when the detected burst erasure has a burst erasure level which is greater than a second selected threshold, the second selected threshold being greater than the first selected threshold, decoding a plurality of received data packets utilizing a second corresponding burst erasure correction code.

3. The method of claim 2, wherein the first corresponding burst erasure correction code comprises a comparatively higher rate burst erasure correction code and the second corresponding burst erasure correction code comprises a comparatively lower rate burst erasure correction code.

4. The method of claim 2, wherein the first corresponding burst erasure correction code comprises a rate 3/4 burst erasure correction code and the second corresponding burst erasure correction code comprises a rate 1/2 burst erasure correction code.

5. The method of claim 2, further comprising:

(e) when the detected burst erasure has a first burst erasure level which is greater than the first selected threshold and is not greater than the second selected threshold, decoding a plurality of received data packets utilizing a multidescriptive burst erasure and random bit error correction code.

6. The method of claim 2, further comprising:

(e) when the detected burst erasure has a first burst erasure level which is greater than the first selected threshold and is not greater than the second selected threshold, decoding a plurality of received data packets utilizing a hybrid burst erasure and random bit error correction code.

7. The method of claim 1, wherein step (b) further comprises:

transmitting a message to a corresponding encoder requesting encoding of a plurality of data packets for transmission using the first corresponding burst erasure correction code.

8. The method of claim 1, wherein step (c) further comprises:

transmitting a message to a corresponding encoder requesting encoding of a plurality of data packets for transmission using the first corresponding random bit error correction code.

9. The method of claim 1, wherein the first corresponding burst erasure correction code is a maximally short ("MS") code.

10. The method of claim 1, wherein the first corresponding burst erasure correction code is a maximally short ("MS") code having a rate R and having integer parameters m and s, in which $R = \frac{ms+1}{ms+1+s}$, and wherein the first corresponding burst erasure correction code has a capacity of correcting erasure bursts of s erasures relative to a guard length (g) and decoding delay (T) in which $g = T = ms + 1$.

11. An apparatus for adaptive multimode decoding for data packet-based communication, the apparatus comprising:

a state detector operative to detect a burst erasure;

a burst erasure corrector coupled to the state detector, the burst erasure corrector operative, when a detected burst erasure has a burst erasure level which is greater than a first selected threshold, to decode a plurality of received data packets utilizing a first corresponding burst erasure correction code; and

an error corrector coupled to the state detector, the error corrector coupled to the state detector, the error corrector operative, when a burst erasure has not been detected, to decode transmitted data packets utilizing a first corresponding random bit error correction code.

12. The apparatus of claim 11, wherein the state detector is further operative, when the state detector has detected a burst erasure, to select output data from the burst erasure corrector.

13. The apparatus of claim 11, wherein the state detector is further operative, when the state detector has not detected a burst erasure, to select output data from the error corrector.

14. The apparatus of claim 11, wherein the error corrector is a Viterbi decoder.

15. The apparatus of claim 11, wherein the burst erasure corrector is further operative, when the detected burst erasure has a burst erasure level which is greater than a second selected threshold, the second selected threshold being greater than the first selected threshold, to decode a plurality of received data packets utilizing a second corresponding burst erasure correction code.

16. The apparatus of claim 15, wherein the first corresponding burst erasure correction code comprises a comparatively higher rate burst erasure correction code and the second corresponding burst erasure correction code comprises a comparatively lower rate burst erasure correction code.

17. The apparatus of claim 16, wherein the first corresponding burst erasure correction code comprises a rate 3/4 burst erasure correction code and the second corresponding burst erasure correction code comprises a rate 1/2 burst erasure correction code.

18. The apparatus of claim 11, further comprising:

a combined erasure and error corrector coupled to the state detector, the combined erasure and error corrector operative, when the detected burst erasure has a first burst erasure level which is greater than the first selected threshold and is not greater than a second selected threshold, to decode a plurality of received data packets utilizing a multidescriptive burst erasure and random bit error correction code.

19. The apparatus of claim 11, further comprising:

a combined erasure and error corrector coupled to the state detector, the combined erasure and error corrector operative, when the detected burst erasure has a first burst erasure level which is greater than the first selected threshold and is not greater than a second selected threshold, to decode a plurality of received data packets utilizing a hybrid burst erasure and random bit error correction code.

20. The apparatus of claim 11, wherein the state detector is further operative to transmit a message to a corresponding encoder requesting encoding of a plurality of data packets for transmission using the first corresponding burst erasure correction code.

21. The apparatus of claim 11, wherein the state detector is further operative to transmit a message to a corresponding encoder requesting encoding of a plurality of data packets for transmission using the first corresponding random bit error correction code.

22. The apparatus of claim 11, wherein the first corresponding burst erasure correction code is a maximally short ("MS") code.

23. The apparatus of claim 11, wherein the first corresponding burst erasure correction code is a maximally short ("MS") code having a rate R and having integer parameters m and s, in which $R = \frac{ms+1}{ms+1+s}$, and wherein the first corresponding burst erasure correction code has a capacity of correcting erasure bursts of s erasures relative to a guard length (g) and decoding delay (T) in which $g = T = ms + 1$.

24. The apparatus of claim 11, wherein the apparatus is embodied as a processor.

25. The apparatus of claim 11, wherein the apparatus is embodied within a receiver.

26. The apparatus of claim 25, wherein the receiver is coupleable to a transmitter through a data packet-based communication channel to form a system for adaptive multimode decoding, and wherein the transmitter includes an adaptive encoder.

27. An apparatus for adaptive multimode decoding for data packet-based communication, the apparatus comprising:

means for detecting a burst erasure;

means for decoding a plurality of received data packets utilizing a first corresponding burst erasure correction code when a detected burst erasure has a burst erasure level which is greater than a first selected threshold;

means for decoding a plurality of received data packets utilizing a first corresponding random bit error correction code when a burst erasure has not been detected; and

means for selecting output data, the means for selecting output data responsive to a detected burst erasure to output burst erasure corrected data, and further responsive, when a burst erasure has not been detected, to output random bit error corrected data.

28. The apparatus of claim 27, further comprising:

means for decoding a plurality of received data packets utilizing a second corresponding burst erasure correction code when the detected burst erasure has a burst erasure level which is greater than a second selected threshold, the second selected threshold being greater than the first selected threshold.

29. The apparatus of claim 27, further comprising:

means for decoding a plurality of received data packets utilizing a multidescriptive burst erasure and bit error correction code when the detected burst erasure has a first burst erasure level which is greater than the first selected threshold and is not greater than the second selected threshold.

30. The apparatus of claim 27, further comprising:

means for decoding a plurality of received data packets utilizing a hybrid burst erasure and bit error correction code when the detected burst erasure has a first burst erasure level which is greater than the first selected threshold and is not greater than the second selected threshold.

31. The apparatus of claim 27, further comprising:

means for transmitting a message to a corresponding encoder requesting encoding of a plurality of data packets for transmission using the first corresponding burst erasure correction code or the first corresponding random bit error correction code.

32. The apparatus of claim 27, wherein the first corresponding burst erasure correction code is a maximally short ("MS") code having a rate R and having integer parameters m and s, in which $R = \frac{ms+1}{ms+1+s}$, and wherein the first corresponding burst erasure correction code has a capacity of correcting erasure bursts of s erasures relative to a guard length (g) and decoding delay (T) in which $g = T = ms + 1$.